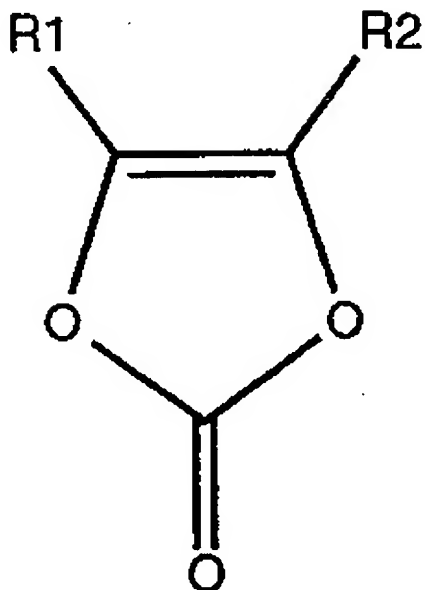


AMENDMENTS TO THE CLAIMS

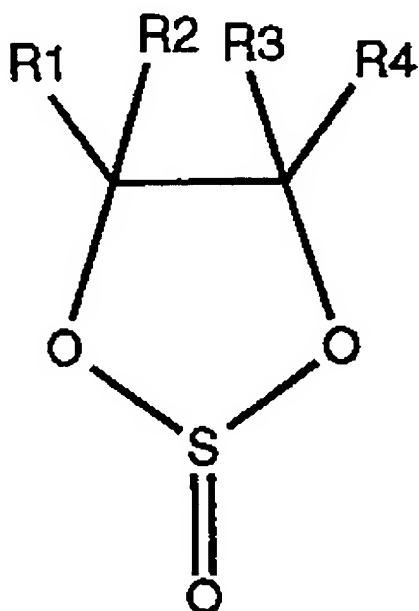
This listing of claims replaces all prior versions of claims in the application.

Claim 1. (Currently amended): A non-aqueous electrolyte secondary cell comprising:
a positive electrode intercalating and deintercalating lithium ions;[[,]]
a negative electrode intercalating and deintercalating lithium ions;[[, and]]
a non-aqueous electrolyte having a non-aqueous solvent and an electrolyte salt;
an outer casing can having mounted therein the positive electrode, the negative electrode,
and the non-aqueous electrolyte, and having an opening portion;
a sealing structure for sealing the opening portion and having a sealing plate; and
an explosion-proof valve mounted in the sealing structure,
wherein[[,]] the explosion-proof valve is capable of separating from the sealing plate to
discontinue current when the internal cell pressure exceeds a predetermined value and the non-
aqueous electrolyte includes a vinylene carbonate ~~derivative~~ compound represented by Chemical
Formula 1, a cyclic sulfite ~~derivative~~ compound represented by Chemical Formula 2 or 3, and a
phenylcycloalkane ~~derivative~~ compound, or an alkylbenzene ~~derivative~~ compound having a
quaternary carbon directly bonded to a benzene ring,



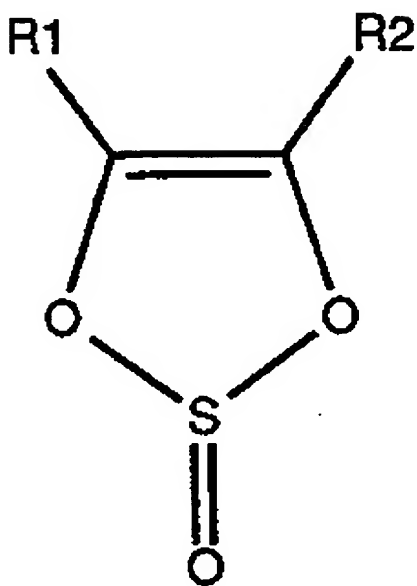
Chemical Formula 1

where R1 and R2 are independently a hydrogen atom or an alkyl group with two carbons or less,



Chemical Formula 2

where R1 to R4 are independently a hydrogen atom or an alkyl group with two carbons or less,



Chemical Formula 3

where R1 and R2 are independently a hydrogen atom or an alkyl group with two carbons or less.

Claim 2. (Original): The non-aqueous electrolyte secondary cell according to claim 1, wherein:

a positive electrode active material contained in the positive electrode is a lithium cobalt compound oxide; and

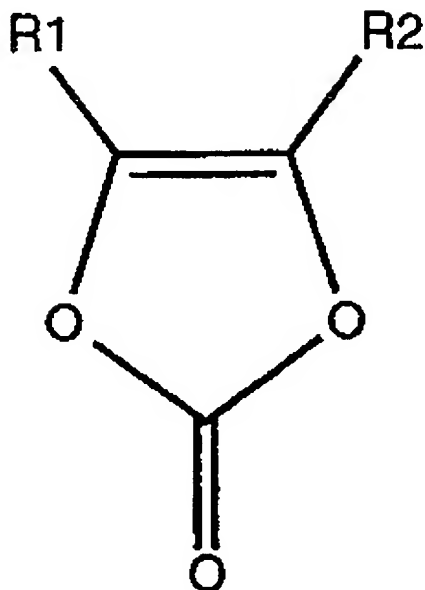
the positive electrode active material has a bulk density of 3.3 g/cm³ or more.

Claim 3. (Original): The non-aqueous electrolyte secondary cell according to claim 1, wherein:

when a total mass of the non-aqueous solvent and the electrolyte salt is taken as 100, an amount of the vinylene carbonate derivative is 0.5 to 3 parts by mass per 100 total mass of the non-aqueous solvent and the electrolyte salt; and

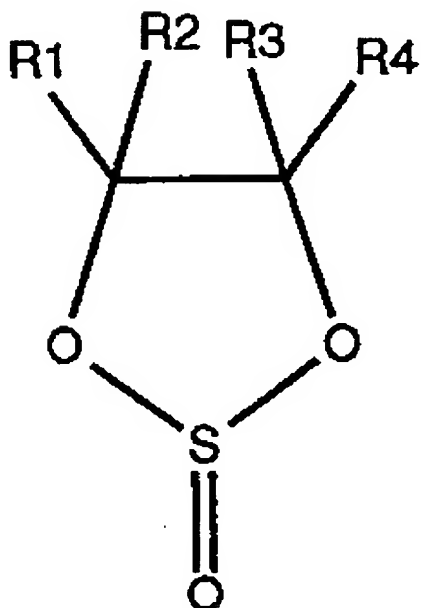
an amount of the cyclic sulfite derivative is 0.1 to 2 parts by mass per 100 total mass of the non-aqueous solvent and the electrolyte salt.

Claim 4. (Currently amended): A non-aqueous electrolyte secondary cell comprising:
a positive electrode intercalating and deintercalating lithium ions;[[,]]
a negative electrode intercalating and deintercalating lithium ions;[[, and]]
a non-aqueous electrolyte having a non-aqueous solvent and an electrolyte salt;
an outer casing can having mounted therein the positive electrode, the negative electrode,
and the non-aqueous electrolyte, and having an opening portion;
a sealing structure for sealing the opening portion and having a sealing plate;
and an explosion-proof valve mounted in the sealing structure,
wherein[[,]] the explosion-proof valve is capable of separating from the sealing plate to
discontinue current when the internal cell pressure exceeds a predetermined value and
the non-aqueous electrolyte includes a vinylene carbonate ~~derivative~~ compound
represented by Chemical Formula 1, a cyclic sulfite derivative compound represented by
Chemical Formula 2 or 3, a phenylcycloalkane derivative compound, and an alkylbenzene
derivative compound having a quaternary carbon directly bonded to a benzene ring,



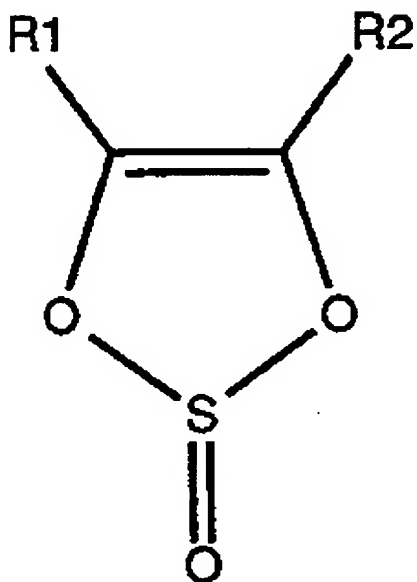
Chemical Formula 1

where R1 and R2 are independently a hydrogen atom or an alkyl group with two carbons or less.



Chemical Formula 2

where R1 to R4 are independently a hydrogen atom or an alkyl group with two carbons or less.



Chemical Formula 3

where R1 and R2 are independently a hydrogen atom or an alkyl group with two carbons or less.

Claim 5. (Original): The non-aqueous electrolyte secondary cell according to claim 4, wherein:

a positive electrode active material contained in the positive electrode is a lithium cobalt compound oxide; and

the positive electrode active material has a bulk density of 3.3 g/cm³ or more.

Claim 6. (Original): The non-aqueous electrolyte secondary cell according to claim 4, wherein:

when a total mass of the non-aqueous solvent and the electrolyte salt is taken as 100, an amount of the vinylene carbonate derivative is 0.5 to 3 parts by mass per 100 total mass of the non-aqueous solvent and the electrolyte salt; and

an amount of the cyclic sulfite derivative is 0.1 to 2 parts by mass per 100 total mass of the non-aqueous solvent and the electrolyte salt.

Claim 7. (New): The non-aqueous electrolyte secondary cell according to claim 1, wherein:

the vinylene carbonate compound is at least one selected from the group consisting of vinylene carbonate, methyl vinylene carbonate, and ethyl vinylene carbonate;

the cyclic sulfite compound is at least one selected from the group consisting of ethylene sulfite, vinylene sulfite and methyl ethylene sulfite;

the phenylcycloalkane compound is at least one selected from the group consisting of phenylcyclohexane, phenylcycloheptane, and phenylcyclopentane; and

the alkylbenzene compound is at least one selected from the group consisting of tert-butylbenzene, tert-amylbenzene, and tert-hexylbenzene.

Claim 8. (New): The non-aqueous electrolyte secondary cell according to claim 4, wherein:

The vinylene carbonate compound is at least one selected from the group consisting of vinylene carbonate, methyl vinylene carbonate, and ethyl vinylene carbonate;

the cyclic sulfite compound is at least one selected from the group consisting of ethylene sulfite, vinylene sulfite, and methyl ethylene sulfite;

the phenylcycloalkane compound is at least one selected from the group consisting of phenylcyclohexane, phenylcycloheptane, and phenylcyclopentane; and

the alkylbenzene compound is at least one selected from the group consisting of tert-butylbenzene, tert-amylbenzene, and tert-hexylbenzene.